

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An apparatus for detecting a deviation of a camera from shaking, comprising:

a shaking detector configured to detect a shaking of the camera based upon an output from at least a first pair of acceleration sensors located on camera coordinate axes an optical axis of the camera, a second pair of acceleration sensors located on an axis in the gravity direction, and a third pair of acceleration sensors located on an axis perpendicular to the optical axis and the axis in the gravity direction;

a calculator configured to calculate rotation angles of each of said coordinate axes based on the output of the ~~pair~~ three pairs of acceleration sensors;

a deviation correction device including a positionable optical element configured to be repositioned in an XY plane perpendicular to an optical axis of the camera based on the rotation angles calculated by the calculator; and

a rotation regulator configured to rotate an image pickup device around a Z axis corresponding to the optical axis of the camera or an axis in parallel with the optical axis.

Claim 2 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 1, wherein the positionable optical element is one of a correction lens and a vari-angle prism.

Claim 3 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 1, wherein one of the coordinate axes of the camera coordinates is an optical axis of the camera.

Claim 4 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 3, wherein at least one of the angular velocity sensors is located on the optical axis of the camera.

Claim 5 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 1, further comprising:

a low pass filter configured to reject a frequency band over 20 Hz from outputs of the angular velocity sensors.

Claim 6 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 4, wherein at least one of the angular velocity sensors is located on a horizontal axis of the camera.

Claim 7 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 5, wherein a first angular velocity sensor is located on an optical axis of the camera to detect deviation in a vertical direction, and a second angular velocity sensor detects deviation in a horizontal direction.

Claim 8 (Canceled).

Claim 9 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 3, further comprising:

a low pass filter configured to reject a frequency band over 20 Hz from outputs of the angular velocity sensors.

Claim 10 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 1, wherein the deviation correcting device adjusts a position of a lens as the positionable optical element in an optical system of the camera based on the rotation angles calculated by the calculator.

Claim 11 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 1, wherein the deviation correcting device adjusts a vari-angle of a vari-angle prism located on an optical axis of the camera as the positionable optical element based on the rotation angles calculated by the calculator.

Claim 12 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 1, wherein the deviation correcting device adjusts a position of an imaging sensor of the camera based on the rotation angles calculated by the calculator.

Claim 13 (Currently Amended): An apparatus for detecting a deviation of a camera from shaking, comprising:

detecting means for detecting a shaking of the camera based upon an output from at least a first pair of acceleration sensor means located on an optical axis ~~camera-coordinate~~ axes of the camera, a second pair of acceleration sensor means located on an axis in the gravity direction, and a third pair of acceleration sensor means located on an axis perpendicular to the optical axis and the axis in the gravity direction;

calculator means for calculating tilt angles of each of said coordinate axes based on the output of the ~~pair~~ three pairs of acceleration sensor means;

deviation correcting means including a positionable optical element for repositioning in an XY plane perpendicular to an optical axis of the camera based on a detected shaking of the camera; and

rotation regulator means for rotating an image pickup means around a Z axis corresponding to the optical axis of the camera or an axis in parallel with the optical axis.

Claim 14 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 13, wherein the positionable optical element is one of a correction lens and a vari-angle prism.

Claim 15 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 14, further comprising:

low pass filter means for rejecting a frequency band over 20 Hz from outputs of the angular velocity sensor means.

Claim 16 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 15, wherein one of the coordinate axes of the camera coordinates is an optical axis of the camera.

Claim 17 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 16, wherein at least one of the angular velocity sensors is located on an axis in parallel with the optical axis of the camera.

Claim 18 (Original): An apparatus for detecting a deviation of a camera from shaking according to claim 17, wherein one of the angular velocity sensor means is located on a horizontal axis of the camera coordinate.

Claims 19-21 (Canceled).

Claim 22 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 13, wherein the deviation correcting means adjusts a position of a lens means as the positionable optical element in an optical system of the camera based on the tilt angles calculated by the calculator means.

Claim 23 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 13, wherein the deviation correcting means adjusts a vari-angle of a vari-angle prism means located on an optical axis of the camera as the positionable optical element based upon the tilt angles calculated by the calculator means.

Claim 24 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 13, wherein the deviation correcting means adjusts a position of an imaging means of the camera based on the tilt angles calculated by the calculator means.

Claim 25 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 1, wherein the rotation regulator includes a rotating shaft located on a point corresponding to the Z axis and a multi-layer piezoelectric actuator on the image pickup device.

Claim 26 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 1, wherein the rotation regulator includes a rotating shaft mounted on a motor that rotates the image pickup device at a predetermined angle.

Claim 27 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 15, wherein the rotation regulator means includes a rotating shaft located on a point corresponding to the Z axis and a multi-layer piezoelectric actuator on the image pickup means.

Claim 28 (Previously Presented): An apparatus for detecting a deviation of a camera from shaking according to claim 15, wherein the rotation regulator means includes a rotating shaft mounted on a motor that rotates the image pickup means at a predetermined angle.